Complete Summary

GUIDELINE TITLE

Guidelines of care for atopic dermatitis.

BIBLIOGRAPHIC SOURCE(S)

Hanifin JM, Cooper KD, Ho VC, Kang S, Krafchik BR, Margolis DJ, Schachner LA, Sidbury R, Whitmore SE, Sieck CK, Van Voorhees AS. Guidelines of care for atopic dermatitis. J Am Acad Dermatol 2004 Mar;50(3):391-404. [212 references] PubMed

COMPLETE SUMMARY CONTENT

SCOPE

DISEASE/CONDITION(S)

Atopic dermatitis

GUIDELINE CATEGORY

Management
Treatment

CLINICAL SPECIALTY

Dermatology

INTENDED USERS

Physicians

GUIDELINE OBJECTIVE(S)

To address the management of patients with atopic dermatitis or atopic eczema

TARGET POPULATION

Children and adults with atopic dermatitis or atopic eczema

INTERVENTIONS AND PRACTICES CONSIDERED

Refer to the "Major Recommendations" field for context.

1. Topical corticosteroids
2. Other topical therapies, such as emollients, calcineurin inhibitors, tacrolimus (FK-506/Protopic®), pimecrolimus (ASM 981/Elidel®), coal tar, doxepin, phosphodiesterase inhibitors
3. Antibiotics and antiseptics (systemic and topical)
4. Oral antihistamines
5. Dietary restrictions (in established atopic dermatitis)
    - Dietary restriction of eggs
    - Evening primrose oil, fish oil, and borage oil
    - Pyridoxine, vitamin E and multivitamins, and zinc supplementation
    - Probiotics
6. Non-pharmacological interventions
    - Psychological approaches, such as behavior modification, stress reduction techniques, group psychotherapeutic treatments
    - Nurse education
    - Ultraviolet (UV) phototherapy
    - House dust mite reduction
    - Avoidance of enzyme-enriched detergents
    - Specialized clothing
    - Balneotherapy
7. Systemic immunomodulary agents
    - Cyclosporin A
    - Interferon-gamma
    - Systemic Corticosteroids
    - Azathioprine
    - Mycophenolate mofetil
    - Intravenous immunoglobulin
    - Leukotriene inhibitors
    - Methotrexate
    - Desensitization injections
    - Theophylline and papaverine
    - Thymopentin
    - Tumor necrosis factor inhibitors
    - Oral pimecrolimus
    - Allergen-antibody complexes of house dust mites
8. Complementary/alternative therapies
    - Chinese herbs
    - Homeopathy
    - Hypnotherapy/biofeedback
    - Massage therapy

MAJOR OUTCOMES CONSIDERED

- Occurrence of atopic dermatitis
- Therapeutic effectiveness, as measured by clinical signs and symptoms, blood cortisol levels, symptom scores, bacterial colonization, and serum immunoglobulin E (IgE) levels
- Adverse events

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Hand-searches of Published Literature (Primary Sources)
Hand-searches of Published Literature (Secondary Sources)
Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

A work group of recognized experts employed an evidence-based model, and the evidence was obtained primarily from a search of MEDLINE and EMBASE databases spanning the years 1990 to June 3, 2003. Search terms included atopic dermatitis and atopic eczema as keywords, subject words, and title words, combined with treatment, therapy, prevention, and prophylaxis. Searches were also undertaken for each specific intervention as keyword, subject word, and title word, alone and combined with atopic dermatitis and atopic eczema. Clinical trials and other sources of information were identified in the results of these searches and in the Clinical Trials Database of the Cochrane Collaboration. Additional searches were done by hand searching publications, including reviews, meta-analyses, and correspondence. Only English-language publications were reviewed. Statistical assistance was provided by Hayes, Inc, a health technology assistance assessment service. Also, there was reliance on the comprehensive "Systematic Review of Treatments for Atopic Eczema" published as a Health Technology Assessment 2000 and listed in the bibliography of the original guideline.

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Expert Consensus (Committee)
Weighting According to a Rating Scheme (Scheme Given)

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

I: Properly designed randomized controlled trial

II-1: Well-designed controlled trial without randomization

II-2: Well-designed cohort or case-control analytic study, preferably from more than one center or research group

II-3: Time series with or without the intervention. Dramatic results in uncontrolled experiments could also be regarded as this type of evidence.

III: Clinical experience, descriptive studies, or reports of expert committees.

METHODS USED TO ANALYZE THE EVIDENCE

Review of Published Meta-Analyses
Systematic Review with Evidence Tables

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

The available evidence was evaluated using a method described by Goodman CS. National Information Center on Health Services Research & Health Care Technology (NICHSR) [Web site]. TA101 Introduction to Health Care Technology Assessment. January 1998. Available at: http://www.nlm.nih.gov/nichsr/ta101/ta101_c1.htm.

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

Every attempt was made to present a balanced approach to clinical recommendations; however, high quality randomized clinical trials were often found lacking for the scope of the guideline. In these cases, consensus of expert opinion was used with a grading of evidence to assist the reader in evaluating the recommendations.

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

External Peer Review
Internal Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

In accordance with the revised 2002 administrative regulations, the final draft was submitted to the 2nd Expert Review Team. This team consisted of 3 to 5

recognized experts that were given a copy of the draft and had 30 days to comment.

The document was then submitted to the Guidelines/Outcomes Task Force and the work group for their approval and, if necessary, further revision. The guideline was then sent to the members of the Board of Directors for a 30-day comment period. Board member comments were reviewed and acted upon by the Committee in consultation with the Task Force.

The draft guideline was then published as a draft and mailed to the entire American Academy of Dermatology membership for a 30-day comment period. In consultation with the Task Force Chairs, the Committee acted upon all comments received. The Committee approved the final draft and submitted it to the Board of Directors for final Board approval on July 26, 2003.

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Level of evidence grades (I-III) are defined at the end of the "Major Recommendations" field.

I. Prevention Measures During Pregnancy and After Birth

- During pregnancy, there can be no global recommendations regarding dietary interventions and aeroallergen avoidance for the mother; there is no conclusive evidence that manipulation prevents atopic dermatitis (AD) either in the infant or child.
- Despite numerous studies, there has been no definitive evidence that exclusive breast feeding, aeroallergen avoidance, and/or early introduction of solid foods influences the development of AD. There is suggestive evidence that prolonged breast feeding may delay the onset of AD.
- Probiotic treatment during pregnancy and nursing may delay the onset of AD in infants and children (Kalliomaki et al., 2001; Rautava, Kalliomaki, & Isolauri, 2002; Rosenfeldt et al., 2003; Saarinen & Kajosaari, 1995).

Recommendation	Consensus of Opinion	Level of Evidence	Reference Numbers
Role of dietary intervention	Unanimous expert opinion	I-II-2	Chandra & Hamed, 1991; Halken et al., 1992; Marini et al., 1996; Odelram et al., 1996; Zeiger & Heller, 1995
Role of aeroallergen avoidance for the mother	Unanimous expert opinion	I	Odelram et al., 1996; Zeiger & Heller, 1995

Recommendation	Consensus of Opinion	Level of Evidence	Reference Numbers
Role of prolonged breast feeding	Unanimous expert opinion	II-2	Chandra & Hamed, 1991; Halken et al., 1992; Bergmann et al., 2002
Role of probiotics	Unanimous expert opinion	I	Kalliomaki et al., 2001; Rautava, Kalliomaki, & Isolauri, 2002; Rosenfeldt et al., 2003; Saarinen & Kajosaari, 1995

II. Topical Corticosteroids

- Topical corticosteroids are the standard of care to which other treatments are compared.
- Cutaneous complications such as striae, atrophy, and telangiectasia limit the long-term use of these agents.
- Despite the extensive use of topical corticosteroids, there are limited data regarding optimal corticosteroid concentrations, duration and frequency of therapy, and quantity of application; similarly, data supporting the perception that long term corticosteroid use is not associated with extracutaneous adverse effects are lacking.
- Altering the local environment by hydration and/or occlusion as well as varying the vehicle can impact the absorption and effect of the topical corticosteroid steroid administered.
- Tachyphylaxis is a clinical concern, but there is no experimental documentation.
- The use of long-term intermittent application of corticosteroids appears helpful and safe in two randomized controlled studies (Van Der Meer et al., 1999; Hanifi, Gupta, & Rajagopalan, 2002). Independent studies of other formulations are needed.

Recommendation	Consensus of Opinion	Level of Evidence	Reference Numbers
Use of topical corticosteroids	Unanimous expert opinion	II-1 & III	Ainley-Walker, Patel, & David, 1998; Friedlander, Hebert, & Allen, 2002
Possible cutaneous complications	Unanimous expert opinion	I & III	Charman, Morris, & Williams, 2000; Hoare, Li Wan Po, & Williams, 2000 (Appendix 3); Kelly et al., 1994

Recommendation	Consensus of Opinion	Level of Evidence	Reference Numbers
Duration of therapy, frequency of application and quantity of application uncertain	Unanimous expert opinion	I-III	Lebwohl, 1999; Van Der Meer et al., 1999; Long, Mills, & Finlay, 1998
Effects of hydration/occlusion	Unanimous expert opinion	I & III	Van Der Meer et al., 1999; Wolkerstorfer et al., 2000; Bleehen et al., 1995; Tharp, 1996
Possible development of tachyphylaxis	Unanimous expert opinion	No studies	No studies
Role of long-term intermittent application of corticosteroids	Unanimous expert opinion	I	Van Der Meer et al., 1999; Thomas et al., 2002; Hanifin, Gupta, & Rajagopalan, 2002

III. Other Topical Therapies

- Emollients are a standard of care, steroid sparing, and useful for both prevention and maintenance therapy.
- Calcineurin inhibitors, pimecrolimus, and tacrolimus have been shown to reduce the extent, severity, and symptoms of AD in adults and children.
- Tar may be associated with therapeutic benefits but is limited by compliance.
- Short-term adjunctive use of topical doxepin may aid in the reduction of pruritus, but the development of side effects may limit usefulness.

Recommendations	Consensus of Opinion	Level of Evidence	Reference Number
Use of emollients	Unanimous expert opinion	I	Hanifin et al., 1998
Use of pimecrolimus	Unanimous expert opinion	I	Ho et al., 2003; Kapp et al., 2002; Meurer et al., 2002; Wahn et al., 2002
Use of tacrolimus	Unanimous expert opinion	I	Ruzicka et al., 1997; Boguniewicz et al., 1998; Paller et al., 2001; Reitamo et al., "Efficacy and safety of tacrolimus ointment

Recommendations	Consensus of Opinion	Level of Evidence	Reference Number
			compared with that of hydrocortisone acetate," 2002; Reitamo et al., "Efficacy and safety of tacrolimus ointment compared with that of hydrocortisone butyrate," 2002
Use of tar	Unanimous expert opinion	II-2	Berberian et al., 1999
Short-term use of doxepin	Unanimous expert opinion	I	Drake, Fallon, & Sober, 1994; Berberian et al., 1999

IV. Antibiotics and Antiseptics

- Patients with AD are commonly colonized with Staphylococcus aureus.
- Antibiotics, both systemic and topical, temporarily reduce S. aureus colonization on skin.
- Without signs of infection, oral antibiotics generally have a minimal therapeutic effect on the dermatitis.
- Oral antibiotics can be highly beneficial when skin infection is present.
- Topical antibiotics can be effective when infection is present; however, development of resistance is a concern.

Recommendation	Consensus of Opinion	Level of Evidence	References
Staph colonization of the skin	Unanimous expert opinion	I	Leyden, Marples, & Klingman, 1974
Role of systemic antibiotics	Unanimous expert opinion	I	Leung, 2002
Role of topical antibiotics	Unanimous expert opinion	I	Ainley-Walker, Patel, & David, 1998

V. Oral Antihistamines

- There is little evidence that sedating or nonsedating antihistamines are effective in relieving itch or urticarial symptoms associated with AD

- For patients with significant sleep disruption due to itch, allergic dermatographism, or allergic rhinoconjunctivitis, sedating antihistamines may be useful. Many patients with AD also have accompanying allergic rhinoconjunctivitis, urticaria, and dermatographism and therefore may be benefited by the use of antihistamines.

Recommendation	Consensus of Opinion	Level of Evidence	References
Role of sedative antihistamines	Unanimous expert opinion	I	Wahlgren, Hagermark, & Bergstrom, 1990; Monroe, 1992
Role of nonsedating antihistamines	Unanimous expert opinion	I	Wahlgren, Hagermark, & Bergstrom, 1990; Monroe, 1992

VI. Dietary Restrictions in Established Atopic Dermatitis

- Dietary restriction of eggs may be beneficial in infants with immunoglobulin E (IgE) reactivity to egg but there is no evidence that other restrictions in diet are of therapeutic value for established AD.
- There is no evidence that fish oil, borage oil, evening primrose oil, or vitamin or mineral supplements have therapeutic value in AD.
- Immediate type hypersensitivity reactions such as urticaria are common in this population and may be mistaken for AD.

Recommendation	Consensus of Opinion	Level of Evidence	References
Role of dietary egg restriction	Unanimous opinion	I-III	Sloper, Wadsworth, & Brostoff, 1991; Lever et al., 1998; Mabin, Sykes, & David, 1995
Role of vitamin and mineral supplements, and evening primrose oil	Unanimous opinion	I	Berth-Jones & Graham-Brown, 1993; Hederos & Berg, 1996; Giménez-Arnau et al., 1997; Henz et al., 1999

VII. Non-Pharmacological Interventions

- Psychotherapeutic approaches to the treatment of AD are supported for a combination of educational and psychological interventions.

- Ultraviolet (UV) phototherapy, including combination broad-band UVB/UVA, narrow band UVB therapy, chemophototherapy using methoxypsoralen (PUVA) and UVA1 (wavelength 340 to 400 nm) is well established in the treatment of AD, although relapse following cessation of therapy frequently occurs.
- It is unclear if house dust mite strategies are effective for most patients with AD.

Recommendation	Consensus of Opinion	Level of Evidence	References
Role of psychotherapeutic approaches	Unanimous opinion	III	Cole, Roth, & Sachs, 1988; Horne, White, & Varigos, 1989; Ehlers, Stangier, & Gieler, 1995
Role of broad-band UVB & UVA	Unanimous opinion	I	Reynolds et al., 2001
Role of narrow-band UVB	Unanimous opinion	I-III	George et al., 1993; Grundmann-Kollmann et al., 1999; Collins & Ferguson, 1995; Hudson-Peacock, Diffey, & Farr, 1996; Reynolds et al., 2001
Role of PUVA	Unanimous opinion	II-2-III	Jekler & Larkö, 1991; George et al., 1993; Grundmann-Kollmann et al., 1999; Morris & Saihan, 2002
Role of UVA1	Unanimous opinion	I	Krutmann et al., 1998
Role of house dust mite allergen reduction	Unanimous opinion	I	Tan et al., 1996; Ricci et al., 2000; Holm et al., 2001

VIII. Systemic Immunomodulary Agents

- Cyclosporin is effective in the treatment of severe AD, but its usefulness may be limited by side effects.
- Interferon gamma may be effective, but the evidence is limited in a subset of patients.
- Systemic corticosteroids are known to be effective in the short-term treatment of AD, but no evidence exists to support their use, and rebound flaring and long-term side effects are limiting.
- Conflicting data exist about the efficacy of azathioprine, mycophenolate mofetil, and intravenous immunoglobulin (IVIg).

- There is insufficient evidence to support the role of leukotriene inhibitors, thymopentin (TP-5), allergen-antibody complexes of house dust mites, desensitization injections, theophylline, and papaverine in the treatment of AD.

Recommendation	Consensus of Opinion	Level of Evidence	References
Role of cyclosporin A	Unanimous opinion	I	Sowden et al., 1991
Role of recombinant human interferon-gamma	Unanimous opinion	I	Hanifin et al., 1993; Stevens et al., 1998; Jang et al., 2000
Role of systemic corticosteroids	Unanimous opinion	III	Sidbury & Hanifin, 2000
Role of mycophenolate mofetil, IVIg, and azathioprine	Unanimous opinion	II-2-III	Wakim et al., 1998; Noh & Lozano, 2001; Meggitt & Reynolds, 2001; Berth-Jones et al., 2002; Neuber et al., 2000; Grundmann-Kollmann et al., 2001

IX. Complementary/Alternative Therapies

- There is conflicting evidence regarding efficacy, and potential concerns regarding hepatic and other toxicities of Chinese herbal therapy for AD.
- Peer-reviewed clinical studies of the value of homeopathy in the treatment of AD have not been reported. To date, there is no evidence in the literature to support its use in the treatment of AD.
- More clinical research is needed to adequately assess the role of hypnotherapy, acupuncture, massage therapy, and biofeedback therapy in the treatment of AD, although preliminary results are encouraging.

Recommendation	Consensus of Opinion	Level of Evidence	References
Role of Chinese herbal therapy	Unanimous opinion	I	Sheehan et al., 1992; Sheehan & Atherton, 1992; Fung et al., 1999

Definitions:

Levels of Evidence

I: Properly designed randomized controlled trial

II-1: Well-designed controlled trial without randomization

II-2: Well-designed cohort or case-control analytic study, preferably from more than one center or research group

II-3: Time series with or without the intervention. Dramatic results in uncontrolled experiments could also be regarded as this type of evidence.

III: Clinical experience, descriptive studies, or reports of expert committees

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

REFERENCES SUPPORTING THE RECOMMENDATIONS

References open in a new window

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of supporting evidence is stated for each intervention. Refer to the "Major Recommendations" field.

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

Appropriate treatment and management of patients with AD or atopic eczema

POTENTIAL HARMS

Theoretical concerns and side effects reported in clinical trials are discussed in the original guideline document.

QUALIFYING STATEMENTS

QUALIFYING STATEMENTS

- Adherence to these guidelines will not ensure successful treatment in every situation. Furthermore these guidelines should not be deemed inclusive of all proper methods of care or exclusive of other methods of care reasonably directed to obtaining the same results. The ultimate judgment regarding the propriety of any specific therapy must be made by the physician and the patient in light of all the circumstances presented by the individual patient.

- This report reflects the best available data at the time the report was prepared, but caution should be exercised in interpreting the data; the results of future studies may require alteration of the conclusions or recommendations set forth in this report.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Living with Illness

IOM DOMAIN

Effectiveness
Patient-centeredness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

Hanifin JM, Cooper KD, Ho VC, Kang S, Krafchik BR, Margolis DJ, Schachner LA, Sidbury R, Whitmore SE, Sieck CK, Van Voorhees AS. Guidelines of care for atopic dermatitis. J Am Acad Dermatol 2004 Mar;50(3):391-404. [212 references] PubMed

ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

2004 Mar

GUIDELINE DEVELOPER(S)

American Academy of Dermatology - Medical Specialty Society

SOURCE(S) OF FUNDING

American Academy of Dermatology operational funds and member volunteer time supported the development of this guideline.

GUIDELINE COMMITTEE

American Academy of Dermatology Work Group
American Academy of Dermatology Guidelines/Outcomes Task Force

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

Work Group Members: Jon M. Hanifin, MD (Chair Work Group); Kevin D. Cooper, MD; Vincent C. Ho, MD; Sewon Kang, MD; Bernice R. Krafchik, MD; David J. Margolis, MD; Lawrence A. Schachner, MD; Robert Sidbury, MD; Susan E. Whitmore, MD; Carol K. Sieck, RN, MSN; Abby S. Van Voorhees, MD, (Chair Guidelines/Outcomes Task Force)

Guidelines/Outcomes Task Force Members: Abby S. Van Voorhees, MD (Chair Task Force); Mark A. Bechtel, MD; Boni E. Elewski, MD; Steven R. Feldman, MD; Cindy Francyn Hoffman, MD; Robert S. Kirsner, MD; Lawrence M. Lieblich, MD; David J. Margolis, MD; Yves P. Poulin, MD; Barbara R. Reed, MD; Dirk B. Robertson, MD; Erin W. Warshaw, MD; Daniel A. Smith, MD; Carol K. Sieck, RN, MSN

FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Each of the following Work Group Members have served as a consultant, received research support or clinical research grants from the following companies:

Jon M. Hanifin, MD, Chair Atopic Dermatitis Work Group: 3M, Admirall, Allergan, Berlex, Cellergy, Connetics, Corixa, Fujisawa, Glaxo Smith Kline, Leo, Ligand, Novartis, P & G, Stiefel, Taisko

Abby S. Van Voorhees, MD, Chair Guidelines/Outcomes Task Force: Allergan, Amgen, Biogen, Boehringer/Ingelhein, Genentech, Glaxo Smith Kline, IDEC, Merck

Kevin D. Cooper, MD: Biogen, Centocor, Genmab, Glaxo Smith Kline, Fujisawa, Proctor & Gamble/Estee Lauder/L'Oreal

Vincent C. Ho, MD: Fujisawa, Leo, Biogen, Novartis, Allergan, Abbott

Sewon Kang, MD: Fujisawa, Novartis

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David J. Margolis, MD: Novartis

Lawrence A. Schachner, MD: Ferndell Laboratory, Fujisawa, Novartis

Robert Sidbury, MD: Connetics, Novartis

Susan E. Whitmore, MD: None

GUIDELINE STATUS

This is the current release of the guideline.

GUIDELINE AVAILABILITY

Electronic copies: Available from the American Academy of Dermatology Association Web site.

Print copies: Available from the AAD, PO Box 4014, Schaumburg, IL 60168-4014, Phone: (847) 330-0230 ext. 333; Fax: (847) 330-1120; Web site: www.aad.org.

AVAILABILITY OF COMPANION DOCUMENTS

The following is available:

- Guidelines of care for atopic dermatitis. Technical report. Schaumburg (IL): American Academy of Dermatology (AAD), 2003.

Electronic copies: Available in Portable Document Format (PDF) from the American Academy of Dermatology Association Web site.

Print copies: Available from the AAD, PO Box 4014, Schaumburg, IL 60168-4014, Phone: (847) 330-0230 ext. 333; Fax: (847) 330-1120; Web site: www.aad.org.

PATIENT RESOURCES

The following is available:

- Eczema/atopic dermatitis. American Academy of Dermatology; Schaumburg (IL): 1995.

Electronic copies: Available from the American Academy of Dermatology Web site.

Print copies: Available from the AAD, PO Box 4014, Schaumburg, IL 60168-4014, Phone: (847) 330-0230 ext. 333; Fax: (847) 330-1120; Web site: www.aad.org.

Please note: This patient information is intended to provide health professionals with information to share with their patients to help them better understand their health and their diagnosed disorders. By providing access to this patient information, it is not the intention of NGC to provide specific medical advice for particular patients. Rather we urge patients and their representatives to review this material and then to consult with a licensed health professional for evaluation of treatment options suitable for them as well as for diagnosis and answers to their personal medical questions. This patient information has been derived and prepared from a guideline for health care professionals included on NGC by the authors or publishers of that original guideline. The patient information is not reviewed by NGC to establish whether or not it accurately reflects the original guideline's content.

NGC STATUS

This NGC summary was completed by ECRI on April 19, 2004. The information was verified by the guideline developer on May 19, 2004.

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